BOSTER BIOLOGICAL TECHNOLOGY
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# Mouse recombinant IL-1 alpha (Interleukin-1 alpha) protein, AF

**Catalog Number:** PROTP01582-6

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## Overview

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| Product Name | Mouse recombinant IL-1 alpha (Interleukin-1 alpha) protein, AF |
| Description | Interleukin-1 alpha (IL1 alpha or IL1alpha) is a member of the interleukin-1 cytokine family, found constitutively present in epithelial layers of the entire gastrointestinal tract, lung, liver, kidney, endothelial cells, and astrocytes. The synthesized IL-1 alpha is a 31 kDa inactive precursor and can be cleaved by intracellular caspase-1 or extracellular proteases to generate the bioactive 17 kDa form and the 16 kDa N-terminal cleavage product. Both precursor and mature IL-1 alpha protein bind to the IL-1 receptor (IL-1R), initiating a cascade of inflammatory cytokines and chemokines production such as IL-6, IL-8, and TNF, in response to viral and bacterial pathogens conditions. IL-1 alpha plays a central role in immune-surveillance mechanisms, stimulating macrophages, neutrophils, and CD8+ T cells activity. |
| Size | 5ug,20ug,100ug |
| Tag | His Tag (C-term) |
| Form | Lyophilized |
| Source | Escherichia coli |
| Formulation | The protein was lyophilized from a 0.2 um filtered solution containing 1X PBS, pH 7.4. If you have any concerns or special requirements, please confirm with us. |

## Storage

Lyophilized protein should be stored at -20°C for 1 year. Upon reconstitution, store at 2°C to 8°C for up to 1 week. Further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA, 10%FBS, 5%HSA or 5% trehalose solution), protein aliquots should be stored at -20°C or -80°C for 3-6 months. Avoid repeated freeze/thaw cycles.

## Purity

>95% as determined by SDS-PAGE.

### Molecular weight

The protein has a calculated MW of 18.93 kDa. The protein migrates as 20 kDa under reducing condition (SDS-PAGE analysis).

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## Activity

Measure by its ability to induce D10.G4.1 cells proliferation. The $ED_{50}$ for this effect is <5 pg/mL. The specific activity of recombinant mouse IL-1 alpha is > 2 x $10^8$ IU/mg.

## Endotoxin

<0.1 EU per 1 ug of the protein by the LAL method.

## Amino Acid Sequence

MSAPYTYQSDLRYKLMKLVRQKFVMNDSLNQTIYQDVDKHYLSTTWLNDLQQEVKFDMYAYSSGGDDSKYPVTLKISDSQLFVSAQGEDQPVLLKEL PETPKLITGSETDLIFFWKSINSKNYFTSAAYPELFIATKEQSRVHLARGLPSMTDFQIS with polyhistidine tag at the C-terminus.

## Reconstitution

Centrifuge at 3000 rpm for 5 mins before opening. It is recommended to reconstitute the lyophilized protein in sterile $H_2O$ to a concentration not less than 100 ug/mL and incubate the stock solution at room temperature for at least 20 mins to ensure sufficient re-dissolved. Do Not Vortex! Vigorous shaking may impair the biological activity of the protein.

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## Usage

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For Research Use Only. Not for use in diagnostic procedures.